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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/789,401

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Jeffrey Wannamaker

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EXAMINER

DAO, THUY CHAN

ART UNIT

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2192

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DELIVERY MODE

04/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/789,401	Applicant(s) WANNAMAKER ET AL.	
	Examiner Thuy Dao	Art Unit 2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-7,10-13 and 33-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-7,10-13 and 33-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on February 19, 2009 has been entered.

2. Claims 1, 3, 5-7, 10-13 and 33-43 have been examined.

Response to Amendments

3. In the instant amendment, claims 1, 5-7, 11, and 12 have been amended; claims 4, 8, 9, and 14-32 have been canceled; and claims 33-43 have been added.

4. The examiner notes that the Amendment contains a reference to another application serial number under page headers (10/289,401), but not to the instant application.

Appropriate correction is requested in the next communication with the Office.

Claim Objections

5. In the instant amendment, the Applicants amend the claims to recite new limitations "a resource utilization" (e.g., claim 1, line 4), and "a resource utilization parameter above a threshold level" (lines 5-6) without pointing out the support.

After further consideration, the examiner does not find any support for the newly added limitations. For a proper prosecution record, the examiner respectfully requests the Applicants to point out the support from the originally filed disclosure.

For the purpose of compact prosecution, the examiner treats the above terms as follows:

 "a resource utilization" as a resource usage (e.g., time, speed, memory usage); and

 "a resource utilization parameter above a threshold level" as a usage/profile parameter/counter above a threshold level.

Response to Arguments

6. Applicants' arguments have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections – 35 USC §103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 3, 6, 7, 10-13, 33, 35, and 37-42 are rejected under 35 U.S.C. 103(a) as being anticipated by Holzle (art of record, US Patent No. 6,240,548) in view of Beadle (art of record but not applied in the previous Office action, US Patent No. 6,530,075).

Claim 1:

Holzle discloses *a computer-implemented method for processing a p-code file, comprising:*

analyzing p-code methods within said p-code file to determine a resource utilization for the p-code methods (e.g., FIG. 1, col.4: 20 – col.5: 19);

identifying one or more p-code methods that have a resource utilization parameter above a threshold level (e.g., FIG. 3, blocks 302-306, col.7: 12-67); and

annotating said identified p-code methods to be compiled (e.g., FIG. 4, col.10: 4-44; col.12: 14-61; col.6: 21 – col.7: 21),

said annotating comprising a priority level hint for each annotated p-code method (e.g., col.2: 57-62, col.8: 66 – col.9: 20),

said priority level hints being hierarchically-related and collectively representing a hierarchical order (e.g., FIG. 4, blocks 404 or 406, col.10: 4-44; col.4: 4 – col.5: 30),

said priority level hints enabling preferential processing of said p-code methods in a hierarchical manner corresponding to said hierarchical order of said priority level hints (e.g., FIG. 6, col.11; 26 – col.12: 12; col.7: 23 - col.8: 39; col.2: 23 - col.3: 8).

Holzle does not explicitly disclose *inserting an in-line priority level hint for each annotated p-code method.*

However, in an analogous art, Beadle further discloses *inserting an in-line priority level hint for each annotated p-code method* (e.g., FIG. 2A-C, keywords extensions such as OPTIMIZE_INLINE, OPTIMIZE_JIT for each Java class/method).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Beadle's teaching into Holzle's teaching. One would have been motivated to do so to optimize running of bytecode as suggested by Beadle (e.g., [0024] and [0089]).

Claim 3:

Beadle further discloses *said p-code file comprises an application for processing by a virtual machine (VM) just-in-time (JIT) compiler* (e.g., FIG. 2A-C and related text).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Beadle's teaching into Holzle's teaching. One would have been motivated to do so as set forth above.

Claim 6:

Holzle discloses *the method of claim 1, wherein: said resource utilization parameter comprises at least one of a method execution time, a frequency of method invocation, a number of instructions and a use of loop structures* (e.g., col.8: 1-53; col.11: 26-65).

Claim 7:

Holzle discloses *the method of claim 1, wherein: said resource utilization parameter comprises at least one of an execution time parameter, an input/output utilization parameter and a processor utilization parameter (e.g., col.4: 4 – col.5: 30; col.8: 41 – col.9: 36).*

Claim 10:

Holzle discloses *the method of claim 1, wherein: said annotating comprises selectively setting each of a plurality of normally unused bits within a method access flag field of an identified class file (e.g., col.7: 23 – col.8: 39; col.8: 1-53),*

wherein said unused bits are selectively set to define thereby said priority level hint of a respective annotated method (e.g., col.6: 21 – col.7: 21; col.8: 41 – col.9: 36).

Claim 11:

Holzle discloses *the method of claim 1, wherein: each identified p-code method is associated with one of a plurality of priority levels, said priority level hints being indicative of respective priority levels (e.g., col.2: 23 – col.3: 8; col.4: 4 – col.5: 30).*

Claim 12:

Holzle discloses *the method of claim 3, further comprising: selectively pre-compiling portions of said p-code file that are designated by the in-line hints (e.g., col.7: 12-67; col.8: 66 – col.9: 63).*

Claim 13:

Holzle discloses *the method of claim 12, wherein: said precompiled portion of said application file is included within a virtual machine (e.g., col.11: 26 – col.12: 12; col.2: 23 – col.3: 8).*

Claim 33 (new):

Holzle discloses *the method of claim 1, further comprising replacing lines of interpreted instructions in the p-code file with compiled code for the identified p-code methods* (e.g., FIG. 6, col.11: 26 – col.12: 12; col.7: 23 - col.8: 39; col.2: 23 - col.3: 8).

Claims 35 and 37-42 (new):

Claims 35 and 37-42, which recite(s) the same limitations as those of claims 1, 3, 6, 7, 10-13, and 33, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claims 35 and 37-42.

9. Claims 34 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzle in view of Beadle and Cierniak (art of record, US Patent No. 7,103,723).

Claim 34 (new):

Cierniak discloses *the method of claim 1, further comprising managing storage of methods in a cache memory according to the hierarchical order* (e.g., col.1: 11 – col.2: 6; col.3: 2-31; col.6: 31-58).

Claim 43 (new):

Claim 43, which recite(s) the same limitations as those of claim 34, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claim 43.

10. Claims 5 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holzle in view of Beadle and US Patent Publication No. 2003/0149960 A1 to Inamdar (art made of record, hereafter Inamdar).

Claim 5:

Holzle does not explicitly disclose *the method of claim 1, further comprising providing said priority level hints are provided as a separate file.*

However, in an analogous art, Inamdar further discloses *providing said priority level hints are provided as a separate file* (e.g., FIG. 1, Source code 100, Compiled classes 102, and Instrumentation directives file 104 are separate files, [0036]-[0038]).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to combine Inamdar's teaching into Holzle's teaching. One would have been motivated to do so to provide a flexible and extensible mechanism for injecting instrumentation code into compiled Java application as suggested by Inamdar (e.g., [0022]-[0029]).

Claim 36 (new):

Claim 36, which recite(s) the same limitations as those of claim 5, wherein all claimed limitations have been addressed and/or set forth above. Therefore, as the reference teaches all of the limitations of the above claim(s), it also teaches all of the limitations of claim 36.

Conclusion

11. Any inquiry concerning this communication should be directed to examiner Thuy Dao (Twee), whose telephone/fax numbers are (571) 272 8570 and (571) 273 8570, respectively. The examiner can normally be reached on every Tuesday, Thursday, and Friday from 6:00AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached at (571) 272 3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

Art Unit: 2192

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Thuy Dao/

Examiner, Art Unit 2192

/Tuan Q. Dam/

Supervisory Patent Examiner, Art Unit 2192